

ABSTRACT OF THE DISCLOSURE

A reflective optical switch for use in optical systems, such as fiber optic communications networks, is disclosed. The optical switch includes not only signal transmission characteristics, but also signal reflection capability. The optical switch includes a semiconductor substrate having first and second optical signal waveguides disposed thereon. The two waveguides intersect one another at a selected angle to form an intersection region. A thermal element is disposed atop the intersection region and can be activated to alter the index of refraction of a portion of the intersection region. An optical signal passing through the intersection region is diverted from one waveguide to another according to the heating of the intersection region by the thermal element. A reflective component disposed in a terminal end of one of the waveguides reflects selected optical signals back to the source from which they came.

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